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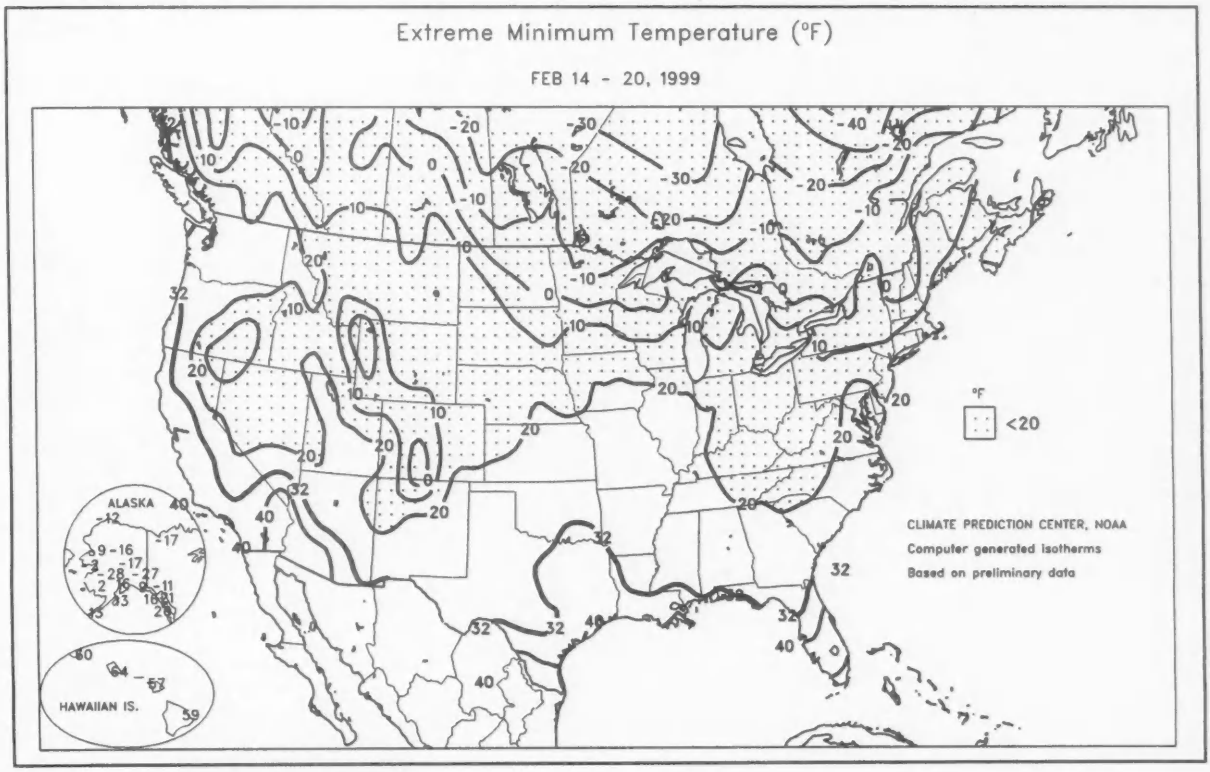
WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

February 14 - 20, 1999

An early-week cool snap in the **Southeast** lowered temperatures to 32°F or below north of a line from **central Louisiana** to **northern Florida**, burning back pastures and winter grains, but beneficially slowing fruit tree bud development. Weekly temperatures in the **Southeast** averaged near normal, ending a 5-week stretch of unusually warm weather. In contrast, temperatures generally ranged from 3 to 9°F above normal across the **Plains**, **Midwest**, and **Northeast**, despite the arrival of colder air at week's end. Meanwhile, temperatures averaged as much as 5°F below normal in **California**, continuing a 4-week cool spell along much of the **West Coast**.

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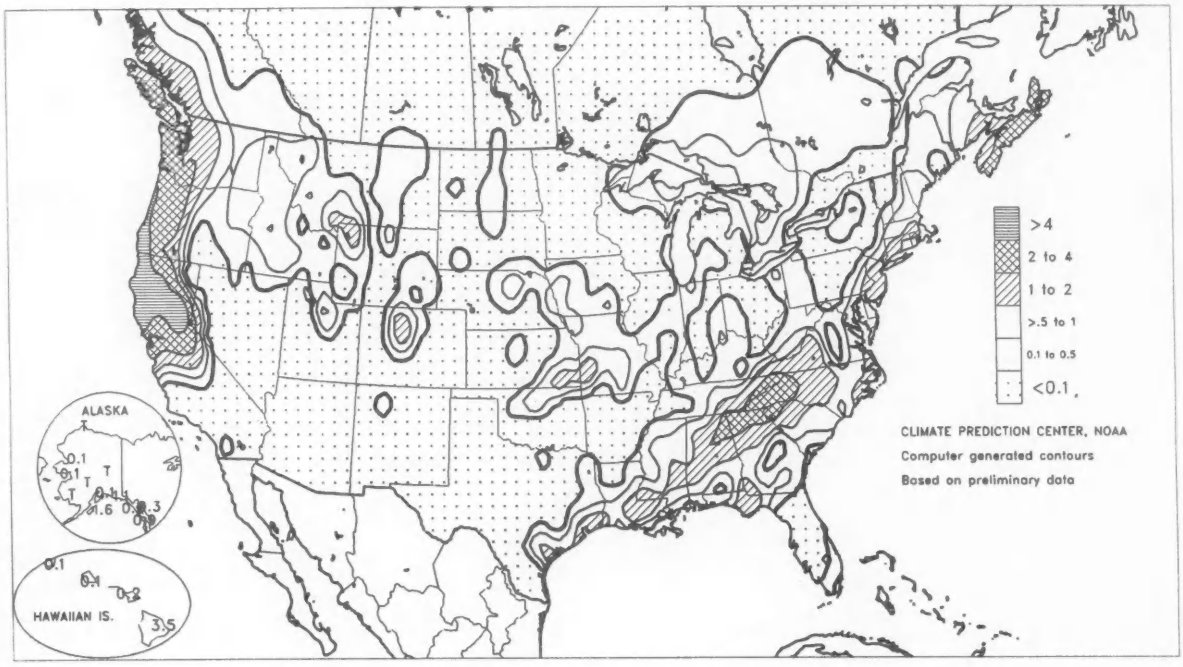
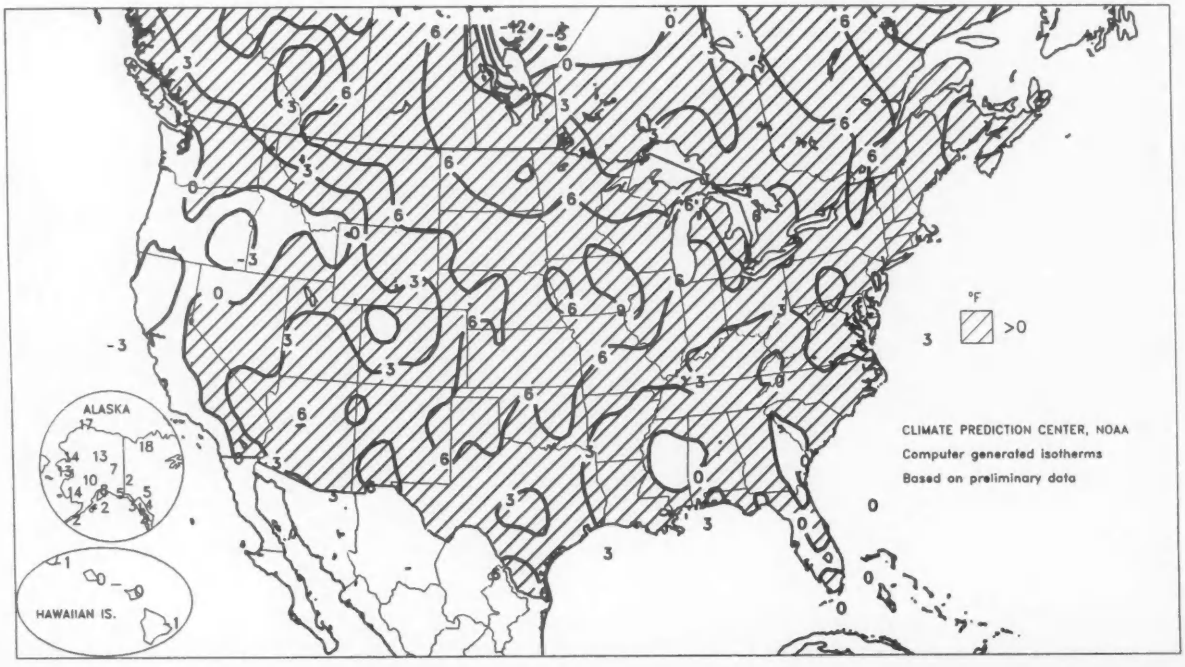
Total Precipitation (Inches)

FEB 14 - 20, 1999



Departure of Average Temperature from Normal (°F)

FEB 14 - 20, 1999



Weather Data for Selected Locations in the Delta

Weather Data for the Week Ending February 20, 1999

Data provided by the Mississippi State Delta Research and Extension Center and compiled by USDA/OCE/WAOB's Stoneville Field Office

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP, °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	INDIANOLA 1S	58	38	66	29	48	–	0.54	–	0.36	18.45	–	10.88	–	52	49	0	1	3	0
	LYON	56	36	65	28	46	–	0.08	–	0.04	15.06	–	10.46	–	–	–	0	1	3	0
	ONWARD	61	39	72	32	50	–	0.20	–	0.11	–	–	9.81	–	54	51	0	1	3	0
	SIDON	57	37	67	30	47	–	0.66	–	0.46	21.14	–	11.28	–	57	49	0	1	3	0
	STONEVILLE *	57	37	68	28	47	0	0.40	-0.79	0.24	20.79	152	14.69	183	57	46	0	2	3	0
	THIGHMAN LAKE	57	38	66	31	48	–	0.56	–	0.38	–	–	–	–	57	49	0	1	3	0

* Based on 1964-93 normals.

Weather and Crop Summary: Cold weather dominated early in the week, with sub-freezing temperatures observed throughout the Mississippi Delta. However, temperatures did not remain below freezing for a sufficient amount of time to damage winter wheat. Despite the cold start, weekly temperatures averaged near normal. In addition, occasional rainfall maintained generally favorable soil moisture conditions in the Delta.

(Continued from front cover)

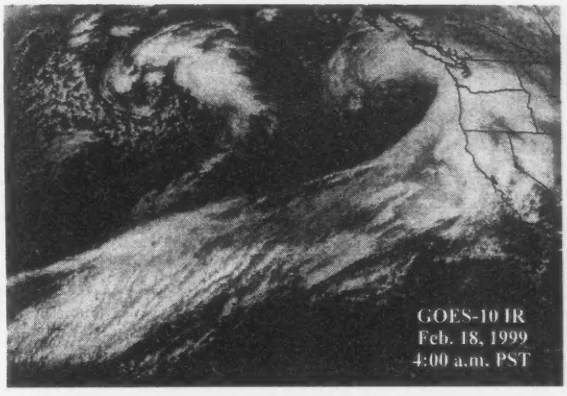
In addition, wet conditions persisted in, and west of, the **Cascades** and **Sierra Nevada**, padding an already substantial mountain snow pack, but halting fieldwork and maintaining soil saturation in lowland areas. Farther south, however, topsoils remained unfavorably dry across the **Southwest** and **southern Texas**. Scattered showers further eased long-term drought in the **southern Atlantic States**, while dry weather helped moisture to drain from saturated winter grain fields from the **Ohio Valley** southward to the **Delta**.

On February 14-15, cold weather settled across the **Southeast**, while record warmth briefly returned to the **Plains**. On Sunday, **Alexandria, LA** noted a low of 29°F. Farther west, more than a dozen locations reported daily-record highs, including **McCook, NE** (78°F) and **Huron, SD** (60°F). A day later, lows in **Florida** dipped to 24°F in **Tallahassee** and 29°F in **Gainesville**.

A series of fast-moving storms delivered frequent precipitation (mostly rain) to the **Eastern States** and occasional light snow to the **northern Plains** and **upper Midwest**. Weekly precipitation topped 2 inches in the **southern Appalachians**, from **northeastern Alabama** to **western North Carolina**. In **Omaha, NE**, February 17-20 snowfall totaled 8.6 inches, accounting for 46 percent of their season-to-date accumulation.

Through February 20, month-to-date rainfall reached 10.26 inches (185 percent of normal) in **Astoria, OR** and 9.70 inches (271 percent) in **Santa Rosa, CA**. The average water equivalent of the **Sierra Nevada** snow pack reached 26 inches (112 percent of normal) by February 20, up from 17 inches (90 percent) at the end of January, according to the California Department of Water Resources. In **southern California**, meanwhile, however, month-to-date rainfall at the **L.A. Civic Center** totaled only 0.56 inches (25 percent of normal), far below last year's February-record precipitation of 13.68 inches. Farther east, year-to-date rainfall through February 20 stood at 0.01 inch (1 percent of normal) in **Tucson, AZ** and 0.09 inch (3 percent) in **San Antonio, TX**.

Dramatically milder air overspread **Alaska**, boosting weekly temperatures 10 to 17°F above normal across northern and western sections. After periods during which low temperatures were below -35°F on a record-setting 19 consecutive days (January 26 - February 13) and highs were below -20°F on 16 consecutive days (January 26 - February 10), **Fairbanks'** lowest reading during the week was -12°F, on Thursday.



In a pattern partially driven by the ongoing La Niña, low-pressure systems churn across the northern Pacific Ocean, sparking very wet conditions in the U.S. Pacific Northwest and heavy snowfall in the Cascades and Sierra Nevada.

National Weather Data for Selected Cities

Weather Data for the Week Ending February 20, 1999

Data Provided by Climate Prediction Center (301-763-8000 EXT. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	59	36	66	23	47	1	1.38	0.20	0.93	16.44	122	10.17	121	86	37	0	2	4	1
	HUNTSVILLE	57	34	66	23	46	2	0.75	-0.47	0.71	17.99	125	10.86	128	89	40	0	2	2	1
	MOBILE	65	42	71	30	53	0	0.30	-1.09	0.25	7.88	57	5.68	67	95	50	0	1	5	0
	MONTGOMERY	63	38	74	27	50	0	0.57	-0.82	0.36	6.50	48	4.49	53	87	38	0	2	4	0
AK	ANCHORAGE	34	21	45	16	27	8	0.06	-0.13	0.06	1.89	78	0.43	32	93	65	0	7	1	0
	BARROW	2	-5	13	-12	-2	17	0.03	0.00	0.02	0.64	200	0.17	85	86	66	0	7	2	0
	FAIRBANKS	14	-7	21	-17	4	6	0.03	-0.08	0.00	1.21	75	0.70	90	91	76	0	7	2	0
	JUNEAU	38	28	41	21	33	4	0.30	-0.62	0.12	15.87	135	10.37	142	98	64	0	7	5	0
	KODIAK	36	22	38	13	29	-2	1.59	0.33	1.31	15.05	83	10.54	93	91	57	0	6	4	1
	NOME	23	9	29	-2	16	12	0.05	-0.09	0.03	3.18	152	2.14	173	90	68	0	7	3	0
AZ	FLAGSTAFF	51	23	56	18	37	5	0.00	-0.53	0.00	1.26	21	0.76	22	73	21	0	7	0	0
	PHOENIX	74	50	77	48	62	4	0.00	-0.17	0.00	0.87	41	0.19	17	45	16	0	0	0	0
	TUCSON	74	42	79	37	58	3	0.00	-0.17	0.00	0.46	19	0.02	1	33	10	0	0	0	0
	YUMA	77	51	80	44	64	3	0.00	-0.08	0.00	0.78	81	0.60	120	57	18	0	0	0	0
AR	FORT SMITH	59	34	70	30	47	4	0.10	-0.57	0.00	6.45	97	3.41	94	85	35	0	3	1	0
	LITTLE ROCK	57	36	65	29	46	2	0.04	-0.87	0.04	11.12	104	7.76	132	89	45	0	1	1	0
CA	BAKERSFIELD	62	42	67	37	52	-2	0.00	-0.28	0.00	4.83	218	4.30	267	91	45	0	0	0	0
	EUREKA	55	42	57	34	48	-1	2.02	0.86	0.83	16.08	104	10.68	114	90	70	0	0	7	1
	FRESNO	60	44	66	39	52	0	0.10	-0.34	0.01	4.56	98	3.89	120	96	59	0	0	3	0
	LOS ANGELES	62	49	66	45	55	-2	0.00	-0.63	0.00	3.00	51	2.35	56	94	65	0	0	0	0
	REDDING	54	39	60	32	46	-5	3.02	1.95	1.59	11.69	79	9.49	102	98	52	0	1	6	2
	SACRAMENTO	56	41	61	34	48	-3	1.20	0.50	0.55	7.28	87	6.63	114	100	68	0	0	5	1
	SAN DIEGO	62	52	65	48	57	-1	0.00	-0.39	0.00	2.86	63	2.26	78	89	65	0	0	0	0
	SAN FRANCISCO	56	46	60	41	51	-1	1.08	0.32	0.45	7.81	80	6.83	102	96	63	0	0	5	0
CO	ALAMOSA	48	8	56	0	28	5	0.00	-0.08	0.00	0.16	18	0.15	33	78	16	0	7	0	0
	CO SPRINGS	50	21	67	15	35	3	0.00	-0.11	0.00	0.27	27	0.12	23	67	18	0	7	0	0
	DENVER	50	21	68	11	35	1	0.00	-0.15	0.00	0.87	58	0.51	60	62	18	0	6	0	0
	GRAND JUNCTION	49	24	55	21	37	1	0.00	-0.12	0.00	0.62	41	0.36	40	76	23	0	7	0	0
	PUEBLO	59	19	76	13	39	3	0.00	-0.08	0.00	0.45	48	0.12	24	63	14	0	7	0	0
CT	BRIDGEPORT	40	28	45	19	34	4	1.02	0.27	1.02	10.19	115	9.14	171	82	59	0	5	1	1
	HARTFORD	40	24	52	12	32	4	0.81	0.01	0.79	8.85	92	8.02	141	82	48	0	7	2	1
DC	WASHINGTON	50	33	64	27	41	3	0.80	0.12	0.60	9.04	117	7.30	158	81	41	0	4	2	1
DE	WILMINGTON	46	26	57	21	37	3	0.96	0.24	0.86	9.26	109	8.22	161	80	40	0	5	2	1
FL	DAYTONA BEACH	71	48	80	40	60	0	0.00	-0.79	0.00	6.74	90	5.39	109	83	43	0	0	0	0
	JACKSONVILLE	66	42	78	29	54	-1	0.12	-0.87	0.10	6.30	71	5.88	96	94	42	0	2	2	0
	KEY WEST	76	66	80	59	71	0	0.22	-0.22	0.22	5.69	106	4.09	123	83	59	0	0	1	0
	MIAMI	77	61	83	51	69	0	0.00	-0.52	0.00	5.19	97	3.21	92	85	47	0	0	0	0
	ORLANDO	74	49	83	41	62	0	0.02	-0.76	0.00	3.93	60	3.31	75	89	38	0	0	1	0
	PENSACOLA	66	45	71	34	55	1	0.20	-1.17	0.18	10.62	83	6.26	74	93	51	0	0	2	0
	TALLAHASSEE	67	39	71	24	53	-1	0.92	-0.49	0.71	7.27	53	5.60	65	91	39	0	2	3	1
	TAMPA	72	52	77	40	62	0	0.01	-0.79	0.01	4.10	65	3.18	77	85	48	0	0	1	0
	WEST PALM BEACH	76	56	83	47	65	-1	0.19	-0.48	0.13	12.29	172	8.37	181	91	48	0	0	2	0
GA	ATHENS	59	35	70	22	47	1	1.41	0.30	0.89	9.99	86	8.14	106	90	42	0	3	3	1
	ATLANTA	58	38	69	24	48	3	0.87	-0.33	0.50	9.15	74	7.35	91	77	38	0	2	3	1
	AUGUSTA	62	32	75	22	47	-1	0.47	-0.80	0.21	9.62	92	8.25	117	97	37	0	4	3	0
	COLUMBUS	63	40	72	29	51	2	0.86	-0.36	0.68	7.37	57	5.78	73	83	37	0	2	1	1
	MACON	63	35	73	24	49	0	0.50	-0.69	0.41	9.53	78	8.01	101	92	37	0	3	3	0
	SAVANNAH	66	39	76	25	52	0	0.25	-0.55	0.23	10.16	115	7.84	133	92	33	0	2	2	0
HI	HILO	77	63	79	59	70	-1	3.51	0.92	2.99	39.37	136	29.08	172	94	68	0	0	4	1
	HONOLULU	80	66	82	64	73	0	0.08	-0.44	0.08	2.82	31	2.51	48	87	51	0	0	1	0
	KAHULUI	81	62	84	57	71	0	0.15	-0.54	0.08	4.59	48	3.43	55	94	60	0	0	4	0
	LIHUE	76	66	77	60	70	-1	0.06	-0.71	0.06	7.88	58	5.52	66	90	71	0	0	1	0
ID	BOISE	42	29	48	26	36	-1	0.62	0.37	0.23	4.36	123	2.71	123	92	52	0	6	5	0
	LEWISTON	48	33	52	29	40	1	0.73	0.51	0.65	2.61	83	1.61	83	89	45	0	2	5	1
	POCATELLO	38	24	41	18	31	1	0.39	0.17	0.20	3.62	131	2.89	173	87	62	0	7	4	0
IL	CHICAGO/O'HARE	40	25	55	19	32	6	0.19	-0.15	0.08	6.65	136	5.45	224	86	54	0	6	4	0
	MOLINE	42	27	60	22	34	9	0.03	-0.27	0.03	4.72	104	3.54	153	82	53	0	6	1	0
	PEORIA	42	27	59	21	34	8	0.07	-0.29	0.06	5.70	117	3.95	162	89	57	0	7	2	0
	ROCKFORD	39	23	55	18	31	7	0.15	-0.14	0.06	4.96	121	4.05	199	90	58	0	7	3	0
	SPRINGFIELD	44	28	59	23	36	7	0.28	-0.17	0.28	4.40	81	3.76	141	85	56	0	5	1	0
IN	EVANSVILLE	47	28	59	20	38	3	0.24	-0.56	0.24	10.72	127	7.24	153	78	46	0	6	1	0
	FORT WAYNE	38	26	50	15	32	6	0.08	-0.40	0.08	5.28	87	4.18	133	85	55	0	6	1	0
	INDIANAPOLIS	43	28	57	19	35	5	0.09	-0.54	0.09	9.89	135	8.89	224	76	47	0	6	1	0
	SOUTH BEND	38	24	53	12	31	4	0.24	-0.23	0.16	6.39	94	4.35	124	85	52	0	5	3	0
IA	BURLINGTON	45	30	63	25	38	10	0.03	-0.27	0.01	5.87	149	4.22	216	78	54	0	5	3	0
	CEDAR RAPIDS	40	26	58	19	33	9	0.04	-0.22	0.00	2.78	86	2.29	140	83	55	0	6	1	0
	DES MOINES	40	26	60	19	33	8	0.16	-0.12	0.12	1.97	66	1.57	96	87	55	0	6	2	0
	DUBUQUE	37	24	54	19	31	9	0.01	-0.32	0.00	2.37	59	2.22	107	84	58	0	6	1	0
	SIOUX CITY	38	19	60	10	29	5	0.30	0.11	0.16	0.80	46	0.68	72	88	59	0	7	3	0
	WATERLOO	39	26	56	21	32	12	0.04	-0.24	0.01	2.23	81	1.95	133	85	59	0	6	1	0
KS	CONCORDIA	51	30	65	27	40	9	0.01	-0.18	0.00	0.94	51	0.84	85	83	46	0	6	1	0
	DODGE CITY	58	27	75	22	43	7	0.01	-0.15	0.01	2.28	150	1.98	230	75	28	0	6	1	0
	GOODLAND	55	23	75	19	39	6	0.00	-0.10	0.00	0.77	77	0.65	108	73	21	0	7	0	0
	TOPEKA	50	33	67	26	41	8	0.36	0.09	0.27	3.41	113	2.19	138	83	53	0	4	2	0

Based on 1961-90 normals

Weather Data for the Week Ending February 20, 1999

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	53	34	64	31	44	8	0.01	-0.24	0.01	3.01	117	1.95	142	79	45	0	2	1	0
KY	JACKSON	48	29	64	16	38	1	0.27	-0.69	0.24	13.46	125	8.30	129	77	42	0	5	2	0
	LEXINGTON	46	27	62	20	36	1	0.29	-0.53	0.21	10.95	121	7.72	153	79	50	0	6	3	0
	LOUISVILLE	48	30	63	20	39	3	0.13	-0.71	0.12	11.65	133	8.38	164	89	46	0	5	2	0
	PADUCAH	50	31	59	21	41	3	0.20	-0.80	0.20	11.22	106	7.51	126	84	49	0	4	1	0
LA	BATON ROUGE	65	42	74	31	54	0	1.01	-0.39	0.82	10.04	70	6.46	73	93	46	0	2	3	1
	LAKE CHARLES	66	44	72	35	55	1	0.98	0.11	0.79	10.09	83	6.47	91	98	57	0	0	2	1
	NEW ORLEANS	67	47	76	37	57	2	0.16	-1.37	0.08	5.73	38	3.48	37	86	50	0	0	2	0
	SHREVEPORT	65	41	72	34	53	3	0.09	-0.89	0.09	19.82	181	3.38	199	86	35	0	0	1	0
ME	CARIBOU	25	9	30	-3	17	5	0.62	0.15	0.59	6.39	91	4.82	128	89	61	0	7	2	1
	PORTLAND	35	22	38	12	28	5	0.73	-0.10	0.67	10.08	96	8.52	145	86	54	0	7	2	1
MD	BALTIMORE	48	28	61	24	38	3	0.92	0.14	0.67	7.99	92	6.72	127	82	37	0	6	2	1
MA	BOSTON	38	28	41	16	33	2	0.83	-0.08	0.83	10.04	99	8.44	137	93	58	0	4	1	1
	WORCESTER	38	24	49	12	31	6	0.54	-0.32	0.54	9.83	97	8.37	137	80	48	0	6	1	1
MI	ALPENA	30	15	44	5	23	4	0.31	0.00	0.16	4.82	106	3.41	135	93	60	0	7	4	0
	GRAND RAPIDS	36	23	48	12	30	5	0.15	-0.20	0.10	5.82	103	4.62	166	88	57	0	6	2	0
	HOUGHTON LAKE	34	16	47	4	25	7	0.31	0.03	0.21	3.94	93	2.90	126	94	56	0	7	4	0
	LANSING	37	23	50	11	30	7	0.19	-0.15	0.12	4.21	89	3.03	127	89	54	0	6	4	0
	MARQUETTE	26	13	40	-4	19	5	1.23	0.80	0.93	8.44	141	6.85	204	90	63	0	7	5	1
	MUSKEGON	37	25	50	14	31	6	0.21	-0.15	0.10	4.67	73	3.35	99	89	52	0	5	4	0
MN	DULUTH	25	7	40	-3	16	3	0.08	-0.11	0.04	2.58	86	1.01	58	90	58	0	7	3	0
	INT'L FALLS	24	2	43	-9	13	4	0.15	0.00	0.09	0.81	37	0.44	33	79	42	0	7	3	0
	MINNEAPOLIS	33	20	47	13	26	8	0.04	-0.18	0.00	3.28	127	2.81	186	84	58	0	7	1	0
	ROCHESTER	31	19	44	12	25	7	0.00	-0.18	0.00	2.97	131	2.68	216	91	68	0	7	0	0
	ST. CLOUD	30	15	42	8	22	7	0.03	-0.12	0.00	1.83	93	0.94	82	90	59	0	7	1	0
MS	JACKSON	62	36	73	28	49	1	0.45	-0.72	0.31	15.67	109	9.43	111	93	44	0	3	2	0
	MERIDIAN	62	35	72	26	48	-1	0.85	-0.52	0.53	10.56	70	6.57	74	97	46	0	3	5	1
	TUPELO	58	35	68	25	46	2	0.67	-0.52	0.60	21.54	150	13.35	164	90	45	0	2	5	1
MO	COLUMBIA	48	31	66	25	39	7	0.58	0.11	0.44	5.81	113	4.59	173	87	59	0	4	3	0
	KANSAS CITY	46	32	64	24	39	7	0.39	0.11	0.20	4.92	146	3.81	214	85	64	0	3	4	0
	SAINT LOUIS	48	33	65	30	40	6	0.43	-0.11	0.28	9.37	151	8.54	269	83	52	0	4	4	0
	SPRINGFIELD	53	29	65	22	41	5	0.09	-0.47	0.07	7.26	114	5.90	185	89	48	0	6	2	0
MT	BILLINGS	42	26	48	17	34	5	0.15	-0.01	0.08	1.72	80	1.13	82	82	40	0	7	2	0
	BUTTE	35	11	41	2	23	1	0.02	-0.06	0.01	2.05	160	0.95	117	89	45	0	7	2	0
	GLASGOW	30	20	34	14	25	7	0.43	0.37	0.29	2.02	222	1.42	263	96	81	0	7	6	0
	GREAT FALLS	41	25	44	20	33	5	0.13	-0.01	0.05	1.04	48	0.81	62	82	37	0	7	2	0
	KALISPELL	39	25	41	17	32	5	0.52	0.26	0.24	4.09	101	2.08	89	95	53	0	7	4	0
	MILES CITY	38	27	43	23	32	8	0.07	-0.04	0.03	1.14	77	0.57	66	97	67	0	7	3	0
	MISSOULA	38	25	42	19	32	2	0.17	-0.02	0.10	2.59	87	1.32	72	93	51	0	7	4	0
NE	GRAND ISLAND	45	24	70	20	35	7	0.02	-0.17	0.01	0.48	29	0.37	41	85	54	0	7	2	0
	LINCOLN	45	25	64	19	35	8	0.46	0.27	0.37	1.31	72	1.13	120	86	56	0	6	3	0
	NORFOLK	40	23	68	18	32	7	0.32	0.12	0.22	0.72	42	0.59	61	84	57	0	7	3	0
	NORTH PLATTE	51	16	72	13	33	5	0.04	-0.07	0.04	0.40	36	0.39	62	91	35	0	7	1	0
	OMAHA	42	23	64	14	32	5	0.41	0.21	0.18	1.64	74	1.51	125	92	59	0	6	3	0
	SCOTTSBLUFF	49	18	69	13	33	3	0.15	0.04	0.04	1.24	92	0.38	49	87	27	0	7	2	0
	VALENTINE	45	23	71	19	34	8	0.31	0.20	0.21	0.96	107	0.54	104	92	50	0	7	3	0
NV	ELY	45	23	50	12	34	4	0.00	-0.17	0.00	1.20	62	0.89	75	76	31	0	7	0	0
	LAS VEGAS	66	45	73	40	55	4	0.00	-0.11	0.00	0.14	12	0.10	12	36	14	0	0	0	0
	RENO	51	31	55	22	41	2	0.12	-0.13	0.02	2.09	75	2.05	112	77	26	0	4	2	0
	WINNEMUCCA	48	25	57	17	36	0	0.07	-0.08	0.05	2.12	102	1.70	144	90	36	0	6	2	0
NH	CONCORD	36	20	44	7	28	6	0.74	0.11	0.58	8.37	112	7.52	174	87	52	0	7	2	1
NJ	NEWARK	45	30	57	21	38	4	1.04	0.29	1.02	10.25	114	9.22	167	83	55	0	4	2	1
NM	ALBUQUERQUE	58	32	65	25	45	5	0.00	-0.11	0.00	0.34	26	0.12	15	46	19	0	4	0	0
NY	ALBANY	37	20	47	6	28	4	0.14	-0.43	0.10	6.73	98	5.69	144	90	59	0	7	2	0
	BINGHAMTON	35	20	52	6	27	4	0.18	-0.40	0.13	7.65	109	6.06	150	86	50	0	6	2	0
	BUFFALO	36	23	51	11	30	5	0.13	-0.45	0.05	8.28	103	6.74	155	85	51	0	6	3	0
	ROCHESTER	38	22	56	9	30	5	0.16	-0.36	0.08	6.13	97	4.53	127	85	50	0	6	3	0
	SYRACUSE	36	21	51	8	28	4	0.36	-0.18	0.25	8.04	114	6.33	165	85	53	0	6	5	0
NC	ASHEVILLE	52	29	61	18	40	1	1.56	0.56	0.81	12.46	132	9.42	159	90	38	0	4	3	2
	CHARLOTTE	57	33	67	16	45	2	1.36	0.40	0.85	9.54	97	6.26	98	84	39	0	3	3	1
	GREENSBORO	53	32	63	17	43	2	0.83	0.00	0.35	12.06	136	8.83	124	87	43	0	5	3	0
	HATTERAS	53	42	63	32	47	2	0.20	-0.80	0.08	11.23	86	6.51	79	83	58	0	1	3	0
	RALEIGH	57	32	70	21	45	2	1.58	0.65	0.86	11.52	123	8.08	133	85	37	0	3	3	1
	WILMINGTON	62	38	74	26	50	2	0.48	-0.44	0.26	10.65	105	6.69	103	84	38	0	2	3	0
ND	BISMARCK	28	15	41	7	22	5	0.23	0.12	0.11	1.72	137	1.48	192	91	76	0	7	5	0
	DICKINSON	33	24	44	19	28	8	0.35	0.27	0.17	1.39	143	1.21	202	94	80	0	7	4	0
	FARGO	26	9	40	-1	17	5	0.00	-0.11	0.00	1.60	98	1.29	129	96	65	0	7	0	0
	GRAND FORKS	21	0	37	-11	11	0	0.02	-0.09	0.00	1.36	81	1.12	108	87	67	0	7	1	0
	JAMESTOWN	21	10	37	-3	15	1	0.19	0.08	0.03	1.78	125	1.59	171	91	75	0	7	6	0
	WILLISTON	28	19	38	15	23	6	0.14	0.03	0.11	2.81	195	2.05	241	92	79	0	7	2	0
OH	AKRON-CANTON	39	24	57	17	32	4	0.28	-0.28	0.17	7.42	112	5.28	144	84	60	0	6	4	0
	CINCINNATI	43	27	59	14	35	2	0.21	-0.47	0.21	10.87	144	7.06	182	83	48	0	6	1	0
	CLEVELAND	39	27	57	16	33	5	0.09	-0.48	0.05	6.85	103	4.93	139	80	55	0	6	3	0
	COLUMBUS	41	28	60	19	34	4	0.17	-0.39	0.08	7.83	119	4.57	124	80	55	0	6	3	0
	DAYTON	40	26	57	15	33	3	0.12	-0.43	0.08	8.29	127	6.16	172	83	53	0	6	2	0
	MANSFIELD	37	24	56	11	30	3	0.16	-0.36	0.12	6.69	105	5.14	154	86	59	0	6	2	0

Based on 1961-90 normals

Weather Data for the Week Ending February 20, 1999

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	39	26	53	12	32	7	0.20	-0.24	0.15	4.71	81	4.10	141	82	51	0	6	3	0
	YOUNGSTOWN	38	24	56	15	31	5	0.28	-0.23	0.16	8.62	134	6.26	178	82	52	0	6	5	0
OK	OKLAHOMA CITY	60	36	67	30	48	6	0.00	-0.41	0.00	4.63	131	3.01	141	79	34	0	2	0	0
	TULSA	57	37	67	29	47	6	0.05	-0.46	0.04	5.88	119	4.31	154	82	42	0	1	2	0
OR	ASTORIA	49	37	53	29	43	-1	2.74	0.90	1.33	40.67	156	24.14	155	95	65	0	1	6	2
	BURNS	37	13	40	5	25	-5	0.84	0.65	0.38	4.36	161	3.21	208	97	65	0	7	5	0
	EUGENE	50	37	53	31	43	-1	2.43	1.07	1.39	22.33	108	13.80	116	96	65	0	1	6	1
	MEDFORD	51	36	52	30	43	0	0.98	0.51	0.41	7.96	107	6.73	164	97	49	0	1	7	0
	PENDLETON	51	34	53	29	42	3	0.38	0.10	0.18	2.78	70	1.41	61	89	47	0	1	4	0
	PORTLAND	49	37	51	31	43	-1	2.12	1.19	1.06	18.91	132	12.17	149	97	61	0	2	5	1
	SALEM	50	36	54	27	43	0	2.08	0.99	1.04	24.48	153	15.69	171	98	63	0	2	6	2
PA	ALLENTOWN	43	24	60	16	34	4	0.57	-0.17	0.51	8.00	91	7.35	140	86	46	0	7	2	1
	ERIE	39	29	57	21	34	8	0.22	-0.36	0.09	9.53	129	5.94	157	73	49	0	5	4	0
	MIDDLETOWN	47	29	64	22	38	6	0.38	-0.36	0.27	6.63	81	6.32	129	77	32	0	5	2	0
	PHILADELPHIA	47	29	62	21	38	4	0.44	-0.25	0.33	7.67	89	6.85	132	86	47	0	4	2	0
	PITTSBURGH	41	24	58	17	32	3	0.12	-0.47	0.04	8.54	121	6.73	161	80	45	0	6	3	0
	WILKES-BARRE	40	24	58	11	32	5	0.07	-0.47	0.07	6.79	111	5.93	164	83	53	0	6	1	0
	WILLIAMSPORT	40	26	57	18	33	5	0.03	-0.67	0.03	7.06	94	6.17	138	81	36	0	5	1	0
RI	PROVIDENCE	42	27	49	17	35	5	0.83	-0.07	0.83	11.89	110	10.62	165	88	50	0	5	1	1
SC	BEAUFORT	64	40	75	27	52	0	0.19	-0.82	0.11	8.13	88	4.85	81	88	36	0	2	2	0
	CHARLESTON	64	39	75	25	51	1	0.37	-0.45	0.16	11.35	128	7.01	123	88	35	0	2	3	0
	COLUMBIA	61	34	74	23	47	0	0.85	-0.17	0.33	8.78	80	6.49	88	86	37	0	4	3	1
	GREENVILLE	57	35	63	20	46	2	1.31	0.20	0.63	11.00	97	6.76	95	82	34	0	3	4	2
SD	ABERDEEN	32	18	51	7	25	8	0.11	-0.01	0.06	0.96	91	0.78	120	91	64	0	7	3	0
	HURON	37	20	60	9	29	8	0.11	-0.07	0.10	0.78	62	0.57	71	91	57	0	7	2	0
	RAPID CITY	45	22	60	15	33	6	0.04	-0.10	0.01	0.40	33	0.35	49	89	45	0	7	2	0
	SIOUX FALLS	36	19	57	13	28	7	0.09	-0.08	0.04	0.70	44	0.46	51	91	55	0	7	3	0
TN	BRISTOL	48	27	59	15	37	-1	1.72	0.86	0.95	12.04	133	6.82	121	92	48	0	6	3	2
	CHATTANOOGA	57	34	65	22	45	3	0.93	-0.27	0.91	18.36	137	12.06	147	93	37	0	4	3	1
	KNOXVILLE	51	31	62	20	41	0	0.99	-0.03	0.75	14.74	128	8.80	126	92	51	0	4	2	1
	MEMPHIS	56	38	62	28	47	2	0.23	-0.88	0.21	12.03	97	7.78	116	83	37	0	1	2	0
	NASHVILLE	55	31	65	20	43	2	0.30	-0.66	0.27	17.11	158	10.71	172	83	39	0	4	2	0
TX	ABILENE	67	41	74	34	54	6	0.00	-0.30	0.00	3.30	115	1.93	105	63	22	0	0	0	0
	AMARILLO	63	30	74	26	46	6	0.00	-0.16	0.00	3.08	235	2.67	297	67	19	0	6	0	0
	AUSTIN	72	46	79	33	59	6	0.00	-0.55	0.00	1.80	35	0.24	7	81	29	0	0	0	0
	BEAUMONT	68	47	75	39	57	3	0.96	0.14	0.75	7.22	80	4.43	81	96	56	0	0	2	1
	BROWNSVILLE	78	56	83	42	67	4	0.03	-0.22	0.01	2.13	58	1.84	77	91	47	0	0	3	0
	CORPUS CHRISTI	76	49	84	34	63	4	0.09	-0.40	0.08	1.51	34	0.79	25	94	45	0	0	2	0
	DEL RIO	76	43	86	33	59	4	0.00	-0.25	0.00	0.23	12	0.04	3	72	20	0	0	0	0
	EL PASO	70	40	75	30	55	7	0.00	-0.11	0.00	0.44	34	0.10	14	39	16	0	2	0	0
	FORT WORTH	64	41	69	36	53	4	0.00	-0.56	0.00	6.35	122	1.93	58	78	38	0	0	0	0
	GALVESTON	68	54	74	47	61	5	1.12	0.58	0.88	7.09	84	3.40	69	88	62	0	0	3	1
	HOUSTON	71	45	76	33	58	4	0.46	-0.28	0.28	6.67	75	2.78	51	92	41	0	0	2	0
	LUBBOCK	66	33	77	24	49	5	0.00	-0.18	0.00	1.61	117	1.35	161	62	16	0	3	0	0
	MIDLAND	70	38	79	29	54	6	0.00	-0.17	0.00	0.91	65	0.33	40	50	14	0	1	0	0
	SAN ANGELO	70	38	74	26	54	5	0.00	-0.28	0.00	1.10	47	0.61	39	70	23	0	2	0	0
	SAN ANTONIO	74	44	84	30	59	5	0.00	-0.45	0.00	0.58	13	0.18	6	79	29	0	1	0	0
	VICTORIA	73	47	79	37	60	3	0.18	-0.31	0.13	6.18	108	2.59	71	98	42	0	0	3	0
	WACO	66	42	73	34	54	4	0.00	-0.53	0.00	6.47	131	2.39	77	84	33	0	0	0	0
	WICHITA FALLS	65	36	70	29	50	5	0.00	-0.37	0.00	4.52	137	2.59	129	77	25	0	2	0	0
UT	SALT LAKE CITY	46	29	52	22	37	2	0.05	-0.26	0.05	3.44	102	2.25	115	84	41	0	6	1	0
VT	BURLINGTON	32	17	41	0	24	6	0.09	-0.32	0.03	4.74	88	4.37	149	94	58	0	7	2	0
VA	LYNCHBURG	52	29	64	17	40	2	1.18	0.41	0.63	9.94	121	6.86	136	81	30	0	4	2	2
	NORFOLK	54	37	69	27	45	4	0.89	0.04	0.89	10.52	111	5.19	83	80	48	0	2	1	1
	RICHMOND	54	31	69	21	42	3	0.53	-0.26	0.51	10.73	123	5.75	105	75	36	0	5	2	1
	ROANOKE	53	31	65	20	42	5	1.05	0.28	0.60	8.08	105	5.74	122	78	27	0	4	3	1
	WASH/DULLES	50	26	65	17	38	4	0.87	0.16	0.59	8.89	113	7.36	157	87	38	0	6	2	1
WA	OLYMPIA	47	32	52	26	40	-2	2.14	0.75	0.75	33.26	163	20.27	165	100	78	0	3	6	2
	QUILLAYUTE	46	34	50	32	40	-2	3.55	0.44	1.61	53.93	138	32.46	138	99	75	0	2	8	3
	SEATTLE-TACOMA	48	36	52	32	42	-2	0.99	0.03	0.49	19.50	137	10.52	126	96	58	0	1	5	0
	SPOKANE	42	29	45	25	35	1	0.82	0.26	0.27	6.78	124	3.48	114	95	61	0	6	5	0
	YAKIMA	46	28	51	24	37	0	0.83	0.46	0.42	3.15	99	2.41	137	97	51	0	7	5	0
WV	BECKLEY	41	24	57	16	32	0	0.41	-0.33	0.20	11.59	141	7.25	145	93	52	0	6	4	0
	CHARLESTON	47	26	63	20	36	0	0.05	-0.71	0.05	9.42	112	6.24	125	92	44	0	6	1	0
	ELKINS	42	20	60	10	31	1	0.11	-0.64	0.11	10.00	116	8.01	155	95	46	0	6	1	0
	HUNTINGTON	47	28	64	21	37	2	0.06	-0.67	0.05	8.65	106	5.99	118	80	39	0	5	2	0
WI	EAU CLAIRE	33	14	49	4	23	6	0.02	-0.15	0.00	2.65	104	2.16	148	91	56	0	7	1	0
	GREEN BAY	33	19	46	12	26	7	0.21	-0.05	0.10	2.55	76	2.25	124	85	58	0	7	3	0
	LACROSSE	39	20	55	11	29	9	0.00	-0.23	0.00	3.23	116	2.93	193	81	47	0	7	0	0
	MADISON	37	21	51	14	29	7	0.08	-0.19	0.01	3.09	86	2.80	159	84	52	0	7	3	0
	MILWAUKEE	37	24	52	19	30	7	0.08	-0.28	0.02	6.11	125	5.23	204	86	54	0	6	3	0
WY	CASPER	41	21	49	14	31	4	0.07	-0.08	0.05	0.63	39	0.54	57	81	38	0	7	3	0
	CHEYENNE	41	20	61	17	31	1	0.09	-0.02	0.05	0.98	96	0.82	84	74	30	0	7	2	0
	LANDER	42	19	47	17	30	4	0.05	-0.10	0.03	1.12	78	0.88	102	84	26	0	7	3	0
	SHERIDAN	43	21	47	16	32	5	0.04	-0.13	0.01	0.86	44	0.82	52	92	43	0	7	2	0

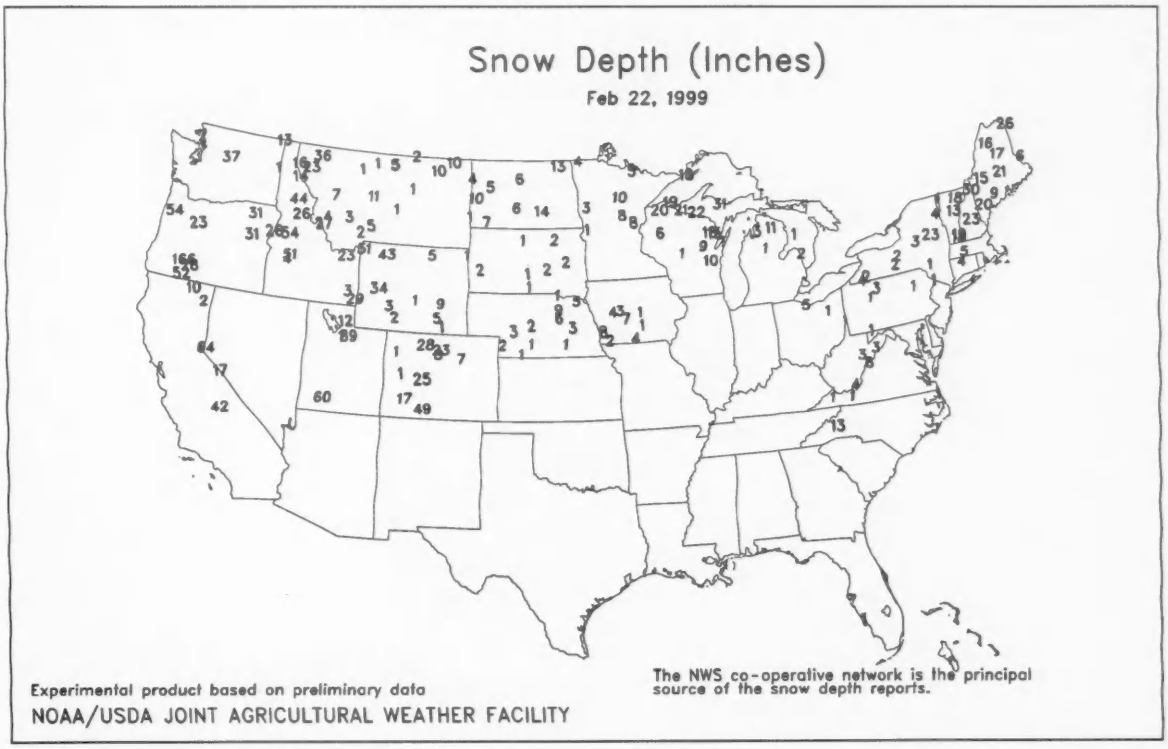
NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

National Agricultural Summary

February 15 - 21, 1999

HIGHLIGHTS

Most of the Nation experienced a dry and unseasonably warm week. Temperatures were especially mild in the Corn Belt, Great Plains, northern Atlantic Coast, and Great Lakes. In Texas, winter wheat conditions improved with warmer weather, but a shortage of soil moisture hindered growth in the Plains. Dry weather allowed planting activities to continue in central, southern, and coastal parts of the State, with only brief, isolated rain delays. The Pacific Coast States remained in a cool weather pattern, and storms continued to batter coastal and low-elevation areas from central California northward with heavy rainfall, causing flooding and mud slides. In northern California, the rainy weather hampered fieldwork but aided growth of small grains, winter forages, and sugarbeets. In the higher elevations of the Sierra and Cascade Ranges, additional snow accumulations increased the risk of avalanches. Southern California continued in a cool, dry pattern. Temperatures averaged near normal in the Southeast, as a cold front brought lower temperatures and rain late in the week. The southern Appalachians received the heaviest rainfall, with lesser amounts stretching southwestward into the lower Mississippi Valley. Dry weather aided fieldwork and sugarcane harvest in Florida. As the week ended, low temperatures had not damaged citrus crops. However, many varieties had open and swelling bloom buds that were vulnerable to cold weather.


Snow Depth (Inches)
Feb 22, 1999
Experimental product based on preliminary data
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
The NWS co-operative network is the principal source of the snow depth reports.

International Weather and Crop Summary

February 14 - 20, 1999

HIGHLIGHTS

FSU-WESTERN: Near- to above-normal temperatures favored dormant winter grains in Russia, Ukraine, Belarus, and the Baltics.

EUROPE: Stormy weather continued to bring widespread rain and snow to most winter grain areas, except for those in the southern half of Spain, where drought conditions continued to develop.

NORTHWESTERN AFRICA: The fourth consecutive week of dryness in Morocco hampered winter grain development.

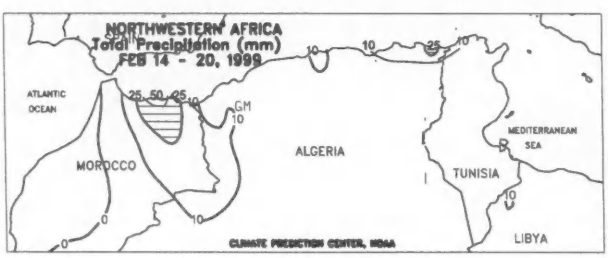
AUSTRALIA: Heavy rain continued in Queensland's northern sugarcane areas, but beneficial dryness dominated the nation's other summer crop areas.

SOUTH AFRICA: Showers brought relief to reproductive to filling corn and other summer crops.

SOUTHEAST ASIA: Drier weather eased flooding along the eastern Philippines and peninsular Thailand.

EASTERN ASIA: Continued mild weather caused winter wheat to start breaking dormancy across the southern portion of the North China Plain.

SOUTH AMERICA: Widespread showers continued to benefit summer crops in southern Brazil, while drier weather prevailed in central Argentina.

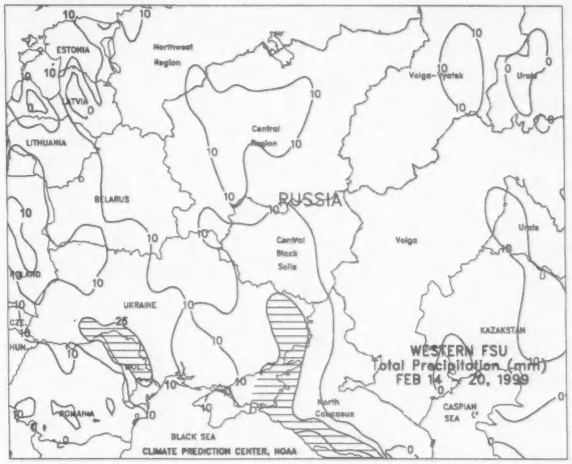


EUROPE

Widespread rain and snow continued to fall over most of the region, boosting moisture supplies for the upcoming growing season. The exception was in central and southern Spain, where a developing drought continued to create unfavorable conditions for winter grain development. Light to moderate showers (3-40 mm) extended from winter grain areas in England and France eastward through the Benelux countries into western Germany. Farther east, snow (3-14 mm, liquid equivalent) spread from central Europe eastward through Poland, the Czech Republic, Slovakia, and Hungary, increasing the moderate to deep snow cover in these areas. Mostly dry weather prevailed in Italy, with light, scattered showers (generally less than 8 mm) falling over southeastern Europe. A warming trend progressed eastward across the continent during the week. At week's end, maximum temperatures ranged from 3 to 9 degrees C in eastern Europe, melting some of the protective snow cover.

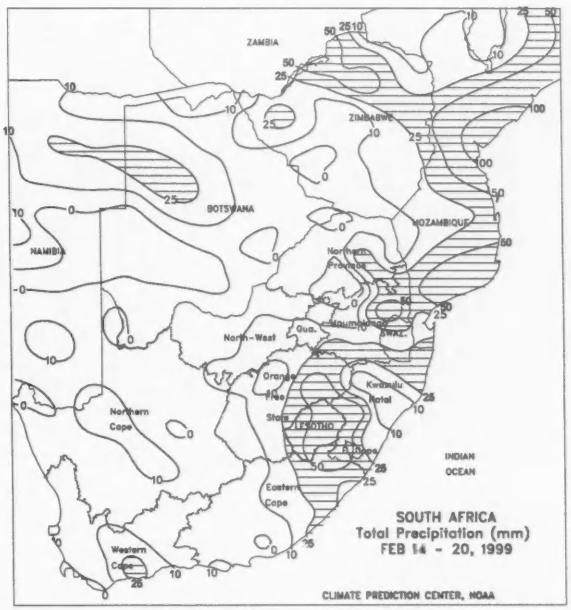
NORTHWESTERN AFRICA

Winter grains remained in the vegetative stage over most of the region. The fourth consecutive week of dry weather prevailed over winter grain areas in Morocco. Moisture conditions were becoming unfavorably dry for crops advancing through the jointing stage. Farther east, light, scattered showers (2-8 mm) moistened winter grains in Algeria and Tunisia, maintaining sufficient moisture for normal winter grain development. Weekly temperatures averaged 2 to 5 degrees C below normal in Morocco, Algeria, and Tunisia, slowing crop development and lowering crop-water requirements. Timely rains will be needed throughout the region in upcoming weeks, as winter grains advance through the reproductive phase of development.



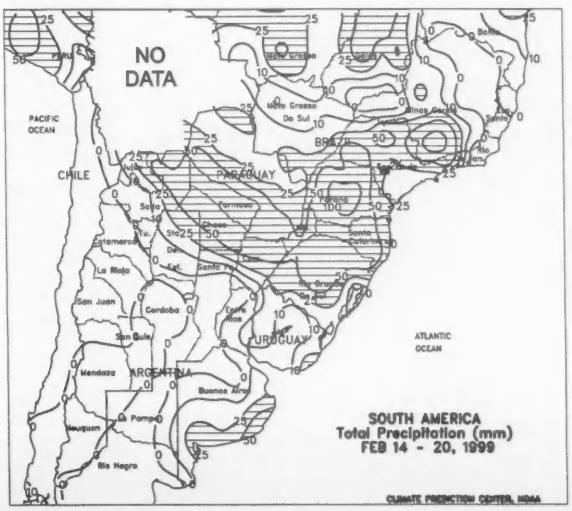
FSU-WESTERN

A warming trend spread eastward during the week, improving overwintering conditions for dormant winter grains in the Baltics and northern Russia, and maintaining favorable conditions in Ukraine and southern Russia (North Caucasus, lower Volga Valley, and southern Black Soils Region). Weekly temperatures averaged 1 to 4 degrees C above normal in the Baltics, northern Russia, and western Ukraine, and 4 to 8 degrees C above normal in eastern Ukraine and southern Russia. The warmest weather prevailed over the extreme southern Ukraine and North Caucasus, Russia, where extreme maximum temperatures ranged from 5 to 14 degrees C. Light rain and snow (2-22 mm, liquid equivalent) fell over most of the region. A moderate to deep snow cover persisted over winter grain areas in Baltics, Belarus, northern Russia, and western Ukraine. Crop areas in the eastern half of Ukraine and extreme southern Russia remained snow-free.



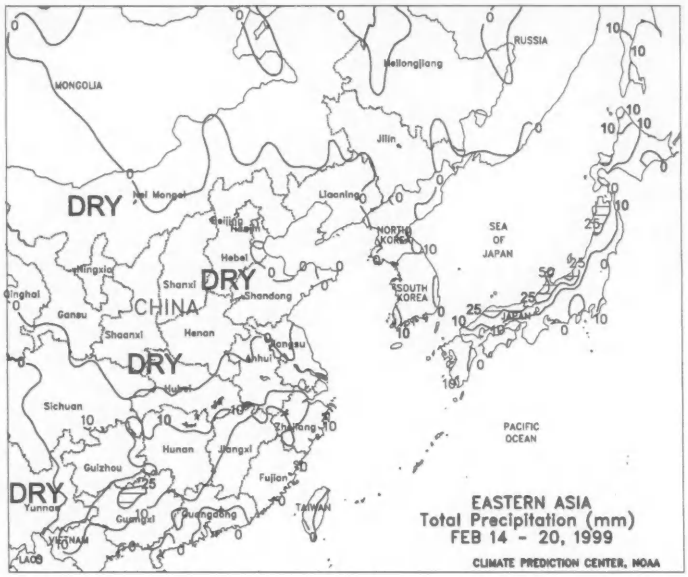
SOUTH AFRICA

Widespread, locally heavy showers (10-25 mm or more in most areas) benefited reproductive to filling corn and other summer crops. Heaviest rainfall (25-50 mm or more) was recorded in chronically dry areas of the eastern corn belt (eastern Free State and southern Mpumalanga), which had tallied below-normal rainfall since mid-January. Seasonable temperatures across the corn belt much of the week reduced the potential for stress. By week's end, however, temperatures in the lower to middle 30's degrees C raised crop moisture demands. Summer warmth also spurred high water use in coastal crop areas. Light to moderate showers (10-25 mm or more) covered the sugarcane areas of KwaZulu Natal, but heavier rain (50 mm or greater) to the east and south of Lesotho boosted irrigation reserves for southern growing areas. Hot, mostly dry weather dominated farmland in Western Cape.



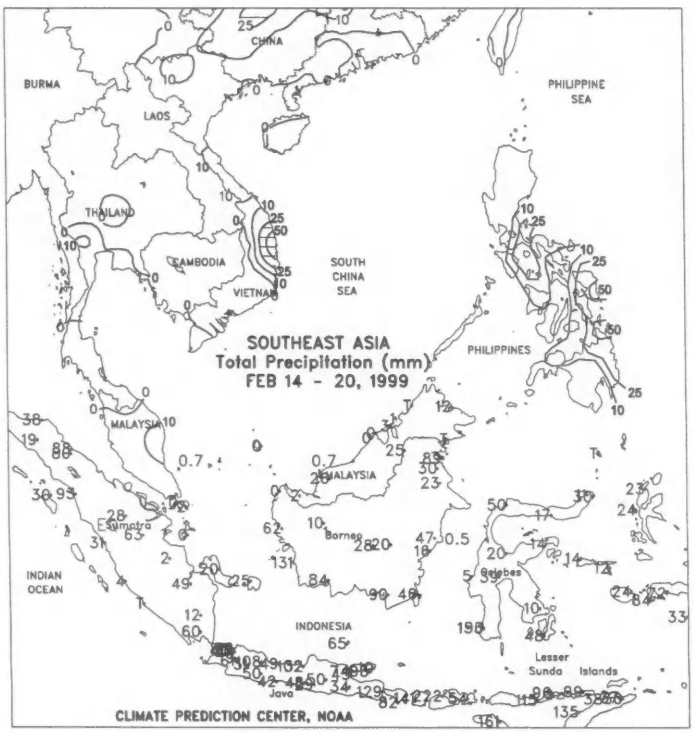
SOUTH AMERICA

In southern Brazil, showers (40-80 mm, with isolated amounts greater than 100 mm) covered Rio Grande do Sul, Parana, and Sao Paulo, aiding reproductive to filling soybeans. Lighter amounts (10-35 mm) were reported in Mato Grosso do Sul, Mato Grosso, and Goias, where rainfall has been below normal the past few weeks. Mostly dry weather prevailed in central Argentina, where soil moisture is adequate due to last week's rainfall. Light to moderate showers (15-30 mm) fell across southern Buenos Aires, aiding filling corn and sunflowers. Moderate to heavy showers (50-90 mm) covered northern Argentina and southern Paraguay, boosting moisture supplies for cotton and soybeans. Temperatures averaged 1 to 3 degrees C above normal in central Argentina and most of southern Brazil and 1 to 2 degrees C below normal in northern Argentina.



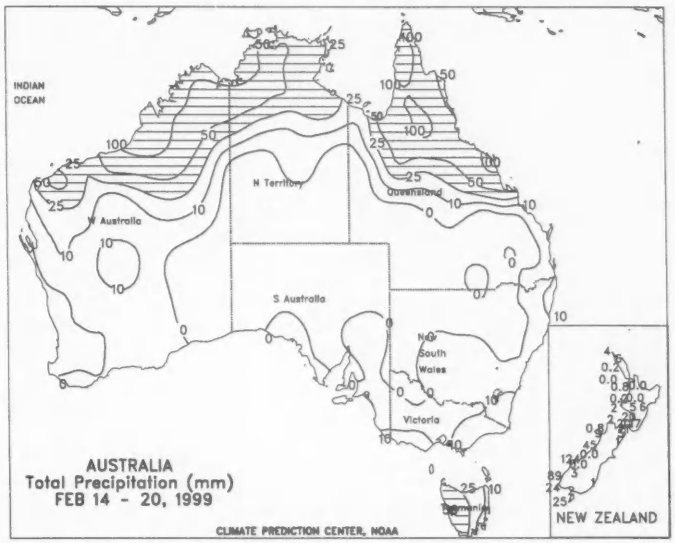
EASTERN ASIA

Continued mild weather (temperatures averaged 3-5 degrees C above normal) caused winter wheat to start breaking dormancy in the southern North China Plain (Henan, southern Shandong, and northern Anhui and Jiangsu). Soil moisture is limited for vegetative rainfed wheat, but adequate irrigation supplies likely exist for irrigated wheat. Farther north in Hebei, northern Shandong, Shaanxi, and Shanxi, winter wheat is still dormant. Light rain (5-20 mm) favored vegetative winter grains and oilseeds across the Yangtze Valley.



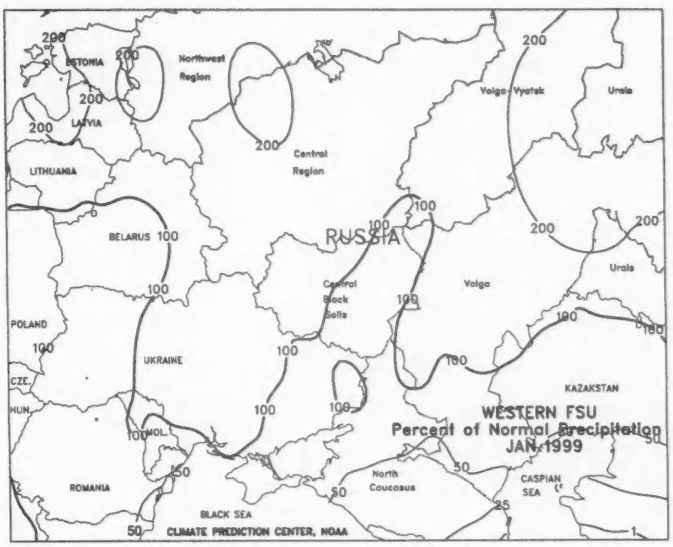
SOUTHEAST ASIA

More seasonable showers (25-100 mm) returned to the eastern Philippines, easing wetness and flooding. Seasonably dry weather dominated Thailand, but moderate showers (25-60 mm) increased moisture supplies for winter-spring rice along the south-central coast of Vietnam. Drier weather (less than 25 mm) prevailed across the oil palm areas of peninsula Malaysia and eased flooding along peninsular Thailand. Moderate showers (30-100 mm) maintained moisture supplies for main-season rice in Java, Indonesia.



AUSTRALIA

Heavy rain (50-100 mm or more) continued over Queensland's northern sugarcane areas, exacerbating flooding and worsening production prospects. Farther south, light showers (25 mm or less) lingered over recently flooded coastal sugarcane areas of northern New South Wales. Elsewhere in the east, however, dry, warm weather dominated the main summer crop and grazing areas. The warmth and dryness was welcomed in interior cotton and sorghum areas for crop maturation and early harvesting. To the west, however, periodic hot weather (highs from the middle 30's to lower 40's degrees C) increased evaporative losses in pasture and range lands of western Queensland to South Australia. Dry, seasonably warm weather dominated agricultural districts in the west and southeast. In New Zealand, showers were generally scattered and light (10 mm or less in most areas) in primary agricultural areas, bringing little relief from long-term dryness.



CORRECTION

The February 17, 1999 edition of the *Weekly Weather and Crop Bulletin* (Volume 86, No. 7) contained an incorrect January Percent of Normal Precipitation figure for Western FSU on page 12. To the left is the correct January Percent of Normal Precipitation figure for Western FSU.

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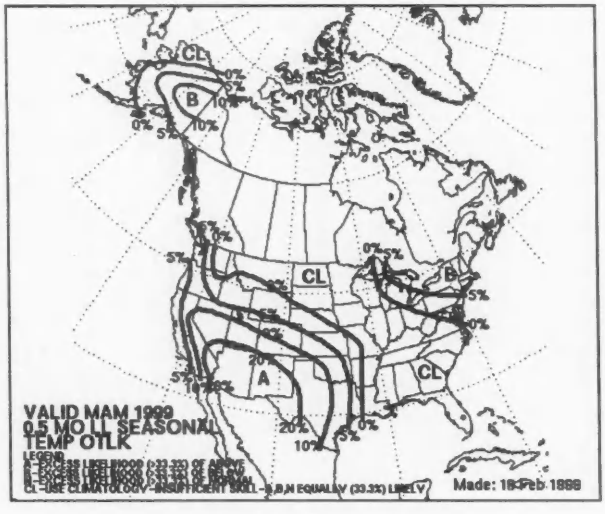
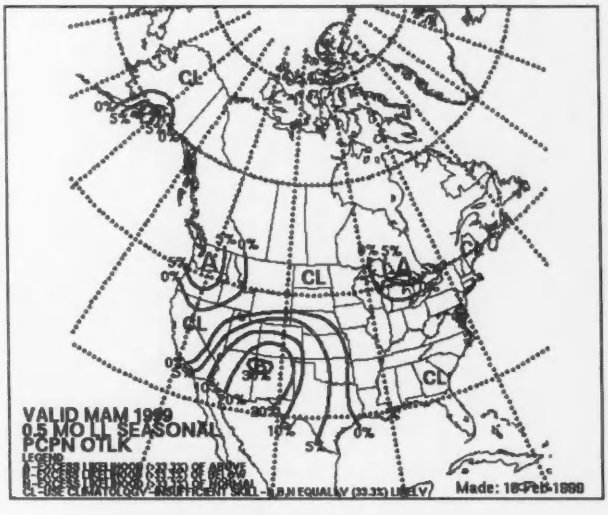


TEMPERATURE: March - May 1999



PRECIPITATION: March - May 1999

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